DOCUMENT RESUME

ED 283 465 HE 020 452

AUTHOR Sheehan, T. Joseph; And Others
TITLE Improving Physician Skills in Managing Morally Problematic Cases.
SPONS AGENCY Aetna Life and Casualty Foundation, Inc., Hartford, CT.; National Fund for Medical Education, Cleveland, Ohio.
PUB DATE Apr 87
NOTE 28p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, DC, April 20-24, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Clinical Experience; *Ethics; Graduate Medical Students; Higher Education; *Interpersonal Communication; *Medical Education; Medical Services; *Moral Issues; *Physician Patient Relationship; Problem Solving; Role Playing; Simulation; Skill Development; Values
IDENTIFIERS Moral Behavior Analysis Instrument

ABSTRACT

The skills of physicians in treating patient cases that involve medical-moral problems were studied with a total sample of 19 fourth-year medical students and residents. The focus was the manner in which residents become aware of the patient's moral concerns, talk about them, and communicate with the patient in order to reach some mutually acceptable solutions to the problem. Routine moral problems regularly seen and experienced by doctors in their practice were of concern. An assessment instrument, the Moral Behavior Analysis (MBA), was developed to assess medical student/resident's performance, and specifically the following attributes/skills: elicitation, moral reasoning, formulating and executing plans, and mutuality. After a pretest with a simulated patient, the medical students and residents provided information about their attitudes and intentions. Students/residents were later provided feedback on desirable skills and viewed a videotape of their performance. Role-playing allowed students and residents to take the views of doctor, patient, and observer. Finally, a post-test allowed the student to encounter a second simulated patient. The two clinical cases used in the research are briefly described, and study results are discussed. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED283465

IMPROVING PHYSICIAN SKILLS IN MANAGING MORALLY PROBLEMATIC CASES

T. Joseph Sheehan, Ph.D.
Sara E. Thal, A.B.
Katherine C. Krause, M.D.
Daniel Candee, Ph.D.
Julie Cotton, Ed.D. (Donnelly)
Sally K. Geer

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

T. Joseph Sheehan

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Funded by the AEtna Life and Casualty Foundation through a grant to the National Fund for Medical Education.

Paper presented at the Annual Meeting of the American Educational Research Association, April 24, 1987, Washington, D.C.

BEST COPY AVAILABLE

HE 020 452

TABLE OF CONTENTS

INTRODUCTION 1
BACKGROUND 3
THE CURRENT PROJECT 6
The Sample 6
The Intervention 6
The Measures 6
Elicitation 7-8
Moral Reasoning
Formulating Plans
Executing Plans
Mutuality

ANALYSIS 9
RESULTS 10
ANALYSIS OF DIFFERENCE SCORES 11
DISCUSSION 13
REFERENCES 17

LIST OF FIGURES

Figure 1: Structural model relating Values (Moral Reasoning), Attitudes (Role Concept), Previous Behavior (Faculty Ratings), and Intentions (Plans) to Performance with Simulated Patients (Moral Behavior)

Figure 2: Issues to be addressed in the Jones and Slade cases

Figure 3: Elicitation Questions

Figure 4: Role Play Scenarios

Figure 5: Outline of MBA Items dealing with humanistic skills and their reliabilities

LIST OF TABLES

Table 1: Means for Pretests, Posttests, and t-Values

Table 2: Comparison of Difference Scores between Experimental Groups and Family Medicine Controls

IMPROVING PHYSICIAN SKILLS IN MANAGING MORALLY PROBLEMATIC CASES*

INTRODUCTION

The aim of this project was to determine whether physician skills in dealing with morally problematic clinical cases could be improved. To address this question we developed, implemented, and evaluated an educational program designed to improve physician abilities to manage cases in which a moral dilemma is embedded in a medical problem.

Earlier work has shown a relationship between moral reasoning and physician performance (Sheehan et al., 1980), and more recent studies have identified physician behaviors that are needed to deal successfully with value-laden cases (Sheehan et al., 1983). Can these behaviors be taught? Some would argue that the specific behaviors needed to be successful in treating medical-moral problems are either inborn traits or learned in childhood and that by the time one is a physician, it is too late to change. As educators and clinicians, we believe that humanistic behaviors are skills that can be taught or enhanced through education. We recognize, however, that the question of whether we are dealing with learned skills or immutable traits is more of an empirical question than a matter of belief and we hope this study will begin to provide some of the data needed to answer this question.

---

*Acknowledgment is gratefully extended to Drs. Dale Matthews, Carl Hinz, Jack McCue, David Schnatz and Luis Diez-Morales for their helpful comments on an earlier draft of this report.

This study was designed to enhance and improve the skills needed to treat patients with medical-moral problems. Our original goals were to:

1. Increase residents' sensitivity to the moral component of medical problems.

2. Enable residents to elicit morally relevant concerns from the patient.

3. Enable residents to formulate alternative plans and options in managing such cases.

4. Enhance residents' ability to reason and assess these plans, that is, do some practical moral reasoning.

5. Enable residents to realize their own values and perspectives and to coordinate their own perspective with that of the patient, that is, to demonstrate a genuine sharing in the process of mutually arriving at an appropriate solution.

6. Enable residents to execute their plans, that is, to resolve the problem.

Our purpose was not to teach medical ethics. Courses in Medical Ethics are being taught by many other groups as described by McElhinney (1978), Callahan and Bok (1980), and Donner (1980). Our approach was that of the educator, the clinician, and the psychologist rather than the philosopher. Our focus was on the manner in which residents become aware of the patient's moral concerns, talk about them, and communicate with the patient in order to reach some mutually acceptable solution to the problem.

Though we were not trying to compete with philosophers, the essential and substantive component in all of our cases and interventions was a routine moral problem regularly seen and experienced by doctors in their practice of medicine. Hilfiker (1983) in his poignant article, describes a 2:00 a.m. call from a nursing home about one of his patients who has developed a high fever. He must decide whether to hospitalize and must do so without help. The patient's relatives have conflicting advice;

the patient herself was very unhappy with her last hospitalization. Dr. Hilfiker considers what a lawyer, a judge, or a philosopher might advise and concludes that none of them can help. Hilfiker experiences anguish and feels helpless; he concludes that his medical education did not prepare him for this moment. Perhaps if he had had practice earlier in his training in dealing with similar situations and in balancing one course of action against the other, he would have been better prepared to cope.

The dilemmas embedded in the clinical cases used in our project are commonplace in medical practice. They are moral dilemmas, although not the classic cases found in textbooks of moral philosophy. To be considered moral, a dilemma must lend itself to what philosophers call a deontic judgment (Frankena, 1973). A deontic judgment judges a behavior to be right or wrong and concludes that one has a duty to perform certain behaviors. For example, deciding whether or not to provide extensive treatment for a critically ill, senile person is both a medical and moral decision. Deciding whether to assume responsibility for helping a reluctant patient inform his wife of a disease he acquired during marital infidelity is less classically moral. In both situations the physician is faced with a moral issue and must consider the rights, duties and welfare of those affected by the final decision.

BACKGROUND

To provide perspective on this project, it might be helpful to review the research which led to it. Our first project was driven by a search for a valid predictor of physician performance. We hypothesized that a physician's level of moral reasoning would be predictive of his or her performance as a physician because those who were more principled in their reasoning would also care more for their patients' welfare and perform

better as doctors. We found statistically significant and meaningful relationships between moral reasoning and physician performance among some 244 physicians from seven different pediatric training programs (Sheehan et al., 1980). Although the correlations can be viewed as moderate, they are consistent with the extensive literature relating moral reasoning to moral behavior (Blasi, 1980). These findings are in sharp contrast to studies of characteristics such as personality, grades in medical school or academic aptitudes, which have been shown to be unpredictive of future physician performance (Price and Taylor, 1971).

Our second project (Sheehan et al., 1985b) was designed to shed light on the nature of the relationship between moral reasoning and physician performance, and if possible, to describe mechanisms or pathways of influence. We began by observing doctors working with their patients. We videotaped many interchanges and spent hours analyzing these tapes. We concluded that there was too much variability in the typical medical interchange and that consistency of findings would require stability in the stimulus and in the situations we observed. We therefore began to speculate about the kind of doctor-patient interchanges likely to produce behaviors we were most interested in observing. On the basis of earlier work by Sanazaro and Williamson (1970), who found that about 10 percent of the most critical medical cases were a combination of medical and value problems, we began to create scenarios that might be used to construct stable stimuli in the form of simulated patients.

From a pool of 12 cases drawn largely from Sanazaro and Williamson's studies, we created two scenarios. For the first case we trained an actress to play the role of Mrs. Slade whose 74-year old senile mother becomes acutely ill in a nursing home, a scenario similar to Hilfiker's. The nursing home is not equipped to deal with emergencies. There are many

questions about whether or not the mother should be hospitalized and how aggressively she should be treated. What is the daughter's attitude toward keeping her mother alive or letting her die? Did the mother ever express her own wishes? What is the quality of the mother's present life? What are her prospects for survival in the hospital versus in the nursing home? These questions are there if the doctor is aware of them and chooses to discuss them.

The doctor, our experimental subject, is given a medical chart describing the mother's condition before seeing Mrs. Slade. The doctor sees Mrs. Slade as a regularly scheduled patient, but knows that she is an actress. The doctor talks with Mrs. Slade and tries to resolve the problem. Mrs. Slade has been trained to raise concerns about the doctor's position so that we can gain maximal insight into the doctor's thinking.

The second case also involves a combination of medical and value issues. The patient, Mr. Jones, appears in the doctor's office suffering from what appears to be gonorrhea, contracted during an extramarital affair. The medical solution is simple; the value problem occurs because Mr. Jones does not want to inform his wife, who by this time, has contracted the disease. There are issues of trust, relationships, considerations about the wife's expressed desire for pregnancy and the requirement on the doctor to report communicable diseases.

We videotaped 44 family medicine residents from different levels of training on both cases and scored each physician's performance using the Moral Behavior Analysis (MBA), an instrument we created to describe and quantify the physicians' performance in dealing with these cases (Sheehan et al., 1985a). We found that values as measured by Kohlberg's Moral Judgment Interview and attitudes as measured by the Role Concept Interview were more important influences on performance than intentions, as measured

by an interview dealing with what the physician stated were specifically attempting to accomplish.

Furthermore, these variables appear to fit a general structural model relating attitudes to behavior (Sheehan et al., 1985b; Sheehan, in press). A sketch of these relationships is shown in Figure 1. The basis of the current project was to ask whether performance on the MBA could be improved and if so, which path through Figure 1 would be most productive. To answer this question we developed an educational intervention in which students and residents were given feedback on their own videotaped clinical performance and had the experience of practicing new performance during role-playing sessions, that is, we concentrated directly on Moral Behavior rather than attempting to alter the structural relationship as depicted in Figure 1.

THE CURRENT PROJECT

The Sample

The experimental groups consisted of 19 family medicine residents, four internal medicine residents and nine fourth-year medical students. There was one family medicine resident who refused to participate, one fourth-year student who refused and another who dropped out after the pretest because of family illness. The four internal medicine residents were volunteers from a pool of six who were asked. The control group consisted of 41 family medicine residents who participated in an earlier non-experimental study.

The Intervention

The experimental intervention consisted of four parts. The first part is a pretest where the physician is assigned to deal with one of two simulated patients. Attitudinal information and information about intentions are also gathered after the simulation. The attitudinal information is gathered from the Role Concept Interview and information

about intentions by means of the Post Interview (Sheehan et al., 1980).

At another session, usually a week later, feedback is given to each physician on his or her pretest. After a brief explanation of the skills we are trying to teach, we then view the pretest videotape and discuss the extent to which the physician was demonstrating these skills. With the first group of physicians we focused on all five sets of skills. During the second year we decided to concentrate on elicitation skills since it is logically impossible to complete the other tasks satisfactorily if elicitation is done poorly.

To sharpen the focus on elicitation we prepared a list of issues to be addressed in each of the two cases. These issues are contained in Figure 2; some specific elicitation questions are shown in Figure 3. Each feedback session is done individually and takes about one hour.

The third phase of the intervention is role playing where two and sometimes three of the participants meet with one of our instructors. After a brief review of the skills, they are then given one of the scenarios contained in Figure 4 where each scenario describes a medical-value conflict. The physicians are then assigned parts: one plays the part of the patient, one the doctor, and if there is a third, the observer.

Role-play situations provide the opportunity of seeing the problem from the viewpoint of the doctor, patient, and observer. The ability to take the role of the other has been repeatedly emphasized as critical in the development of principled moral reasoning. The role play gives the physician a chance to practice under realistic conditions.

The fourth phase of the intervention is a posttest where each resident encounters the second simulated patient. The order of the cases was random.

The Measures

A subset of 26 MBA items dealt with the value component of the

patient's problem, as compared to other MBA items which were reflective of general interpersonal and social skills. The subset of 26 MBA items can be grouped into five conceptually distinct components of physician behavior: Elicitation, Moral Behavior, Formulating Plans, Executing Plans, and Mutuality. Figure 5 outlines the MBA items that make up each component, along with alpha reliabilities as reported in an earlier study (Sheehan et al., 1985a). A brief summary of each component follows.

Elicitation: the extent to which the physician attends to and draws from the patient his or her concern and view of the value problem. We found some physicians who never acknowledged the presence of a value problem and limited their attention to the medical problem. Others were aware of the value conflict, but were so intent on explaining the microbiology of infection that they were unable to address the moral issue or learn anything of the patient's views.

Moral Reasoning: a physician's ability to verbalize the moral issue, to learn the patient's thinking about the issue, and to engage the patient in a discussion of that issue. Note, this is not the measure of Moral Reasoning derived from the Kohlberg Moral Judgment Interview.

Formulating Plans: a physician's skill in formulating a plan of action, while taking into account patient characteristics, urgency and reasonable alternative plans of action.

Executing Plans: the manner in which the physician carried out the plans, considered the patient's ability to carry out the plan, whether the patient needed additional help, made plans for follow-up of both the moral and medical problem, and considered consequences.

Mutuality: the balance between doctor and patient in the interaction. Who was controlling? Was the relationship mutual or out of balance? Was the physician paternalistic? Where was the locus of responsibility for

solving the problem? Whose problem was it? Was it the doctor's problem, the patient's problem, or was responsibility shared between the doctor and patient?

ANALYSIS

In the initial proposal subjects were their own controls. However, from our previous project we were able to determine the sequence in which 41 of the 44 doctors were given the two cases and thus could use this group as an historical control group. Eighteen of the 41 family medicine residents had taken Slade first and Jones second; 23 had Jones first and Slade second. To determine the reliability of the MBA scores, we used a randomized block design as described by Winer (1971). All videotapes in the current study were scored blindly by four raters. Two of these raters had also scored all tapes from the previous study. One additional rater had scored 18 videotapes from the earlier study. All MBA items are scored with 1 as the best score. The MBA subtest scores are the average scores assigned by all available raters. An overall MBA score was also assigned by each rater with 1 as high and 7 as low.

Analyses were first done by disaggregating according to groups, pretests, and raters, that is, we looked at groups separately: family medicine controls, family medicine experimentals, internal medicine experimentals, and fourth-year medical students. Next we analyzed on the basis of the pretest, that is, those who had Slade first and Jones second and those who had Jones first and Slade second. We also analyzed by rater with five possible raters, the same four on all of the experimental subjects. Within each group we computed paired t-tests on the difference scores between pretest and posttest performance. To examine differences among the groups we computed univariate and multivariate analyses of

variance on difference scores and on posttest scores alone. We used the total pretest score as a control variable, and also covaried on Kohlberg's moral reasoning score and years of residency.

Aggregate analyses were also done once scorer reliability was deemed adequate. Aggregation was done across raters, across pretest and posttest, and groups were compared one to another by way of analysis of variance.

RESULTS

The randomized block design analysis of rater reliability was performed on the four raters for each group separately: each of five MBA scales plus Overall performance using Slade as a pretest and Slade as a posttest. The reliability of the average of four ratings on Slade as pretest for Overall performance was 0.79 and 0.77 for Slade as the posttest; the reliability of the Elicitation scale with Slade as the pretest was 0.88 and 0.89 with Slade as the posttest. These figures are almost identical to what we had reported on the earlier study (Sheehan et al., 1985a). All other scale reliabilities are within this range which suggests that we can be comfortable in aggregating across raters in subsequent analyses. Thus, we shall skip the presentation of data disaggregated by raters and proceed to average across all available raters: four raters for all experimental subjects, and two or three raters for the controls.

In the analyses that follow, the data are also aggregated across cases, that is, ignoring whether Jones or Slade was taken as a pretest. This was done because the pretest to posttest differences for all experimental groups showed improvement irrespective of case; this was not true for the controls. Also, disaggregating by case would seriously affect statistical power as it halves our sample.

ANALYSIS OF DIFFERENCE SCORES

Table 1 contains the mean pretest, posttest, and difference scores by groups for the five MBA subscores as well as the Overall score. Each score is the average of scores assigned by all available raters. All scales were scored inversely so that 1.0 was the highest possible score. (Note: a lower posttest score indicates improvement, and differences are computed as pretest minus posttest scores, so a positive difference score shows a gain from pretest to posttest.) The range of actual scores for the Elicitation scale was 1.0 to 3.25. The range for Overall performance was 1.0 to 6.5.

Insert Table 1 about here

As seen in Table 1, all differences between pretest and posttest averages are positive except one, an indication that subjects improved between pretesting and posttesting. The differences are miniscule for the controls and none are statistically significant. All of the differences except one are statistically significant for the fourth-year medical students. One difference, Elicitation, is significant for the family medicine experimental group using a two-tailed test; two more would be if a one-tailed test were used; Mutuality has an associated P-value of .08 and Planning has a P-value of .10; these P-values can be halved for a one-tailed test.

Although none of the differences for the internal medicine residents are statistically significant, the size of the differences are comparable to those for the family medicine experimental group and the fourth-year medical students. For example, the average difference score for Elicitation is 0.42 for the internists, with a t-value of 1.58, while it is 0.27 with a t-value

of 2.48 for the family medicine experimentals. The other difference scores for the internists are similar to the difference scores for the fourth-year medical students but on the sample size of 4 the standard errors are too large. With even a slightly larger sample size it is likely that these differences would have reached statistical significance.

Insert Table 2 about here

Table 2 shows the comparative difference scores between experimentals and controls: the difference scores are the pretest to posttest differences for experimentals minus the pretest to posttest differences for the controls. These scores show the relative gains of the experimental groups when compared to any gains made by the controls. The algebraic sign for all difference scores is positive indicating that pretest to posttest gains were greater for all three experimental groups than they were for the controls. The extent to which these gains were statistically significant was determined using analysis of variance and single degree of freedom contrasts enabling the differences for each group to be tested against the differences for the controls. All of the gains for fourth-year medical students except one are statistically significant when compared to the gains for the controls. None of the gains for the family medicine residents are statistically significant when compared to the gains for the controls, nor are the gains for the internists, although the gains for the internists are generally better than those for the family medicine experimentals.

None of the additional analyses, including the use of Kohlberg's moral reasoning score, year of residency, and pretest scores as covariates, or using posttest scores alone, altered the above findings.

DISCUSSION

Although the above findings should be encouraging to those interested in altering or enhancing humanistic skills, there are several cautions especially in the area of measurement and sample selection. The Jones and Slade cases are not parallel either in content or difficulty. The kinds of issues underlying the two cases are different. In Jones there is an ethical issue, truth telling, but for some residents, the legal code was so clear that there was no ethical issue. In Slade there is a clear-cut quality of life issue. Despite these and other differences between the two cases, the humanistic behaviors measured by the MBA could be assessed reliably in both cases.

In the selection of subjects, the control group represents historical controls, data being gathered on them between 1981 and 1984 during the course of an earlier study. We were fortunate that we had originally assigned the cases in a random sequence and were able to specify that sequence for 41 of the 44 "controls." The original proposal was designed to use experimental subjects as their own controls and had no provision for a control group because of costs and other considerations. The nature of the family medicine residency program may well have changed during the interval from 1981 to 1985, with a new department head and many new faculty. Despite these cautions, it is reassuring that none of the gains between pretests and posttests are statistically significant for the control group. In fact, all difference scores for the controls are close to zero and with a sample size of 41 there is little need to worry about a Type II error, whereas the gains for all experimental groups are more substantial, and some may fail to reach significance simply for lack of power.

Another concern with the family medicine residents is that they are

accustomed to having their performance videotaped and reviewed by faculty on a regular basis. This practice was also true with the historical controls. To the extent that criticizing one's own performance on videotape is effective, we may have been working on the margin of possible improvement with these residents. If that is so, it may be even more impressive that the intervention had such an impact on their Elicitation skills and possibly their Mutuality and Planning as well.

The possible contamination of family medicine residents was recognized in the original proposal and for that reason we had planned to use residents in internal medicine rather than family medicine. Despite support from the internal medicine faculty and administration, the residents at our target site were unanimously unwilling to participate in this project, and expressed the view that the study was unscientific and would be of little value to them as doctors. Four of six internal medicine residents in a second internal medicine program did agree to participate. The family medicine faculty and administration felt that the project was totally compatible with their program goals and felt comfortable incorporating the project into their educational program.

Nor were students part of the original design. However, in view of the strong negative reaction of the internal medicine residents, we wondered whether fourth-year students might be a more appropriate group for such an educational program. Fourth-year students are familiar enough with the hospital and clinic setting and with medical problem solving to be challenged by a medical problem that has underlying moral issues. Fourth-year students also are less pressured and have fewer responsibilities than residents. They are far more accessible and if the experiment worked with them, we felt it would prepare them better for internship and residency.

Within these limitations of subjects and measurement instruments, there do seem to be some stable findings. Specifically, it does seem that humanistic skills can be affected by an educational intervention in which residents or students review and assess their performance in a structured setting, and can practice these skills through role playing. It appears that across the board improvement is possible with fourth-year medical students, but concentration on elicitation skills may be more productive with residents. Although the Table 1 difference scores for internists appear similar to those for students, it is unfortunate that only four internists were available for this study.

Consistent improvement in elicitation skills is most encouraging. If the resident is unaware of the moral issue or is not skilled in eliciting the patient's views on that issue, there is little hope or opportunity of exercising the other MBA skills. The other skills, moral reasoning, formulating plans, executing plans, and mutually arriving at a workable solution, assume that the doctor is aware of and has some grasp of the patient's perspective.

Furthermore, the fact that internists and students seemed most susceptible to being influenced by the educational intervention appears to suggest two things. First, internal medicine residents may have excellent growth potential if they could be induced to participate in such a program, and second, without much inducement, fourth-year students may have the most potential and may be optimally ready for such a program.

Finally, despite the difficulties we encountered in mounting and carrying out this study and despite the limitations due to using historical controls, family medicine residents who may have been "contaminated" by previous experience in videotaping and criticizing their behavior, and despite the lack of content similarity in the Slade and Jones cases, there

do seem to be encouraging results for those interested in teaching humanistic skills in medical school and in residency programs. Until there is evidence to the contrary, we will persist in our belief that humanistic behavior is something that can be learned as an adult.

REFERENCES

Blasi, A. (1980) Bridging moral cognition and moral action: a critical review of the literature. *Psychological Bulletin*, 88:1-45.

Callahan, D. and Bok, S. (1980) *Ethics Teaching in Higher Education*. New York: Plenum Press.

Donner, K. (1980) *Teaching Bioethics: Strategies, Problems and Resources*. Hastings on Hudson, NY: The Hastings Center.

Frankena, W. (1973) *Ethics*. Englewood Cliffs: Prentice-Hall.

Hilfiker, D. (1983) Allowing the debilitated to die. *New England Journal of Medicine*, 308:716-719.

McElhinney, T. (1978) *Survey of 80 Programs Teaching Medical Ethics in Medical Schools*. Washington, DC: Institute on Human Values in Medicine.

Price, P.B., Taylor, C.W., Nelson, D.E., Lewis, E.G., Loughmiller, G.C., Mathiesen, R., Murray, S. Maxwell, J. (1971) *Measurement and Predictors of Physician Performance: Two Decades of Intermittently Sustained Research*. Salt Lake City: LLR Press.

Sanazaro, P.J. and Williamson, J.W. (1970) Physician performance and its effects on patients: a classification based on reports by internists, surgeons, pediatricians and obstetricians. *Medical Care*, 8:299-308.

Sheehan, T.J. (in press) The importance of knowing when to stop considering alternative structural equation models. *Evaluation & The Health Professions*.

Sheehan, T.J., Candee, D., Willms, J., Donnelly, J.C., Husted, S.D.R. (1983) Moral reasoning and clinical performance using live simulations. Paper presented at the annual meeting of the American Educational Research Association, Montreal.

Sheehan, T.J., Candee, D., Willms, J., Donnelly, J., Husted, S. (1985a) Measuring humanism in doctor-patient relations. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

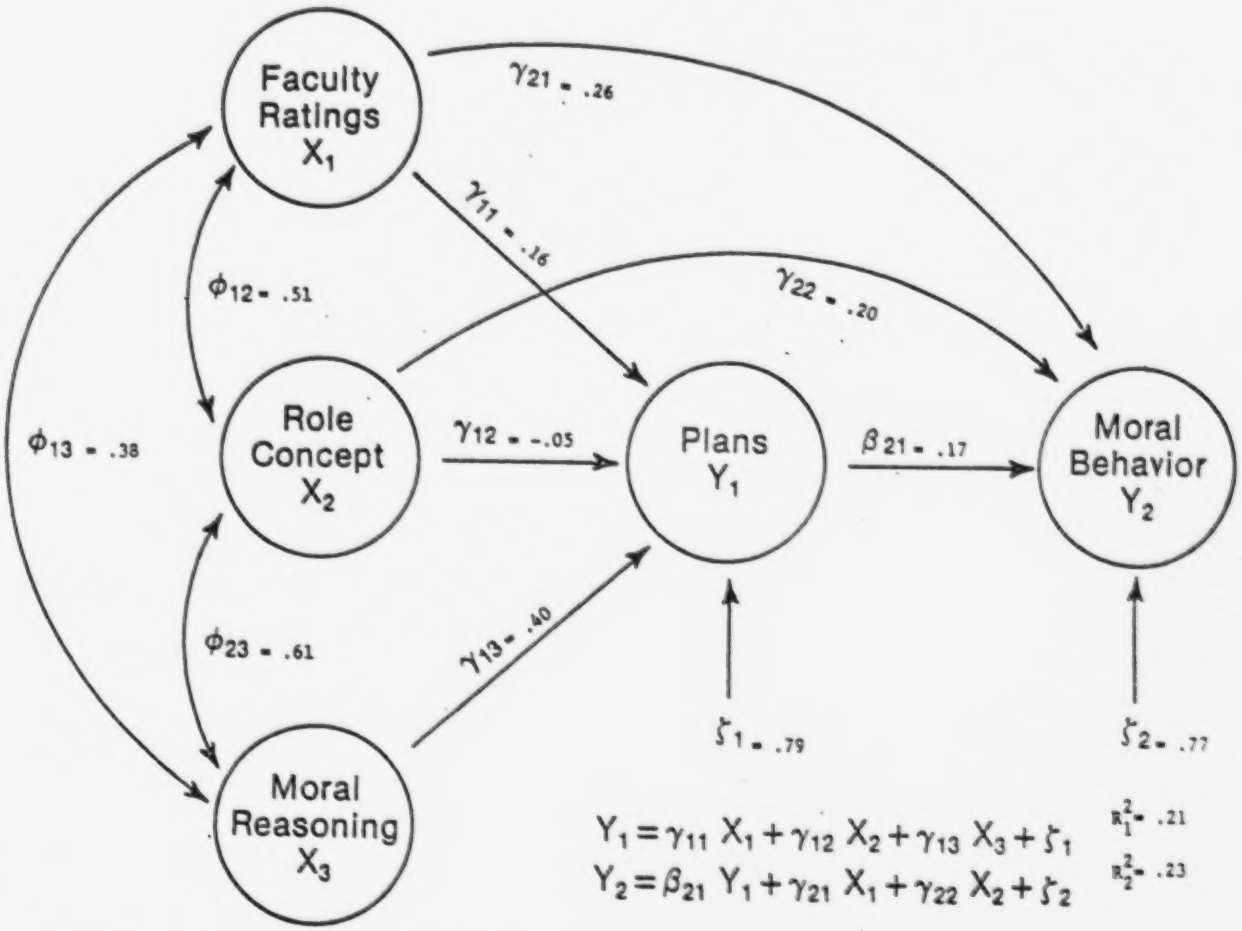
Sheehan, T.J., Candee, D., Willms, J., Donnelly, J., Husted, S. (1985b) Structural equation models of moral reasoning and physician performance. *Evaluation & the Health Professions*, 8:379-404

Sheehan, T.J., Husted, S.D.R., Candee, D., Cook, C.D., Bargen, M. (1980) Moral judgment as a predictor of clinical performance. *Evaluation & The Health Professions*, 3:393-404.

Winer, B.J. (1971) *Statistical Principles in Experimental Design*. New York: McGraw-Hill Book Company.

FIGURE 1

STRUCTURAL MODEL RELATING VALUES (Moral Reasoning), ATTITUDES (Role Concept), PREVIOUS BEHAVIOR (Faculty Ratings), and INTENTIONS (Plans) to PERFORMANCE WITH SIMULATED PATIENTS (Moral Behavior



Total coefficient of determination = .35

$X_1^2 = 0.09$ p= 0.759

Goodness of fit index = 0.999

FIGURE 2

ISSUES TO BE ADDRESSED IN THE HOWARD JONES CASE

1. How did the patient get the disease?

   a. Who were his sexual contacts?

2. Does the wife know that Howard is having an affair?

3. Patient fears consequences to marriage if wife is told.

   a. Patient does not want wife to be told.

4. Does the patient want the marriage to survive?

5. How can the wife be told with best results (or least harm) to the marriage?

   a. What is the degree of trust between partners?

ISSUES TO BE ADDRESSED IN THE JEAN SLADE CASE

1. How does Mrs. Slade feel about her mother being kept alive?

2. How does Mrs. Slade feel about letting her mother die?

3. Has mother expressed any wish about how she would like to be treated in this type of situation?

4. What is the mother's quality of life? What could she do before?

5. What are the mother's prospects for survival in the hospital/nursing home?

FIGURE 3

ELICITATION QUESTIONS

1. How can I help you today?
2. Could you go back through the history of your problem and bring me up to date?
3. Did anything change recently that motivated you to seek help now (not relevant to our simulated cases)?
4. What have you tried so far to take care of this?
5. What is your understanding of the problem?
6. What do you think would help?
7. What do you think you are going to have to do to take care of this situation?
8. Let's focus on what we have to take care of today.
9. Are there any questions you would like to ask me?
10. Is there anything that you are worried about -- that may be in the back of your mind -- that you would like to share with me?
11. Let me be sure that I understand what you have been saying. . . let me summarize. (Can come in several places in the interview.)

FIGURE 4

ROLE PLAY SCENARIO I

Gerald is a 27-year old white male engaged to Mary Ann, age 25. They are both patients of Dr. Nylinger, a family physician in private practice. Seven years ago Dr. Nylinger treated Gerald for mumps orchitis which resulted in aspermia and presumed sterility. Today Gerald is arriving in Dr. Nylinger's office to have his premarital license application signed. Dr. Nylinger does not know if Gerald has informed Mary Ann of his sterility and believes this needs to be discussed during this visit, especially because Mary Ann has repeatedly spoken to Dr. Nylinger of her desire for children.

ROLE PLAY SCENARIO II

Two years later Mary Ann makes an appointment with Dr. Nylinger to discuss the fact that her gynecologist has completed a sterility workup on her and Gerald, and has informed them that while she is completely normal, Gerald was found to be sterile. The gynecologist informed them both that Gerald's mumps at age 20 was probably the cause of his sterility. Gerald has admitted to Mary Ann that both he and Dr. Nylinger knew this to be the case prior to the marriage. Mary Ann is extremely angry and upset that she had not been informed of this fact prior to the marriage.

ROLE PLAY SCENARIO III

At the close of Gerald's visit, he and Dr. Nylinger agreed to have a three-way meeting with Mary Ann where they could discuss the impact of Gerald's sterility on their marital plans. Gerald, however, cancelled the meeting. Two weeks later, Dr. Nylinger was confronted with Mary Ann's ignorance of the situation when, during her premarital exam, she shared her excitement over planning to start a family soon after her marriage. After great soul-searching, Dr. Nylinger decided that his obligation to share this information with Mary Ann overrode his ethic of confidentiality to Gerald. One week later Dr. Nylinger arrived in his office to find an extremely agitated Gerald in his waiting room, demanding to be seen. Gerald confronts Dr. Nylinger with the news that Mary Ann has broken their engagement after learning from Dr. Nylinger of Gerald's sterility. Gerald is distraught and believes he has been deeply wronged by Dr. Nylinger.

FIGURE 5

OUTLINE OF MBA ITEMS DEALING WITH
HUMANISTIC SKILLS AND THEIR RELIABILITIES

ELICITATION: (Alpha =.94)

Attends to patient's concerns
Acknowledges patient's expressed concerns
Seeks information about patient's moral as well as medical complaint
Encourages patient initiative
Makes an effort to discover the patient's agenda
Tries to find out how significant other is seeing the situation

MORAL REASONING: (Alpha =.88)

Articulates values
Grapples with moral issues
Learns about patient's attitudes towards his/her moral problem

FORM PLANS: (Alpha =.85)

Discusses reasonable alternatives and/or possible future complications
Encourges discussion of patient's concerns before final closure of interaction
Discusses urgency and treatability
Patient characteristics considered in medical complaint
Patient characteristics considered in moral complaint

EXECUTE PLANS: (Alpha =.91)

Asks about patient's ability to carry out management plan
Plans course of action for moral problem(s)
Present plans for follow-up of moral problem(s)
Expresses concern for medical and moral consequences to wife or mother

MUTUALITY: (Alpha =.94)

Control of situation
Type of master plan
Mutuality
Degree of paternalism
Locus of responsibility
Master plan
Is supportive of patient

TABLE 1

MEANS FOR PRETESTS, POSTTESTS, AND t-VALUES

		Pretest	Posttest	Difference	t-Values
Family Medicine Controls (N = 41)	Elicitation	1.69	1.63	0.05	0.52
	Mutuality	1.51	1.56	-0.05	-0.57
	Moral Reasoning	1.68	1.63	0.05	0.43
	Planning	1.44	1.42	0.02	0.25
	Execution	1.51	1.50	0.01	0.11
	Overall	2.97	2.94	0.03	0.10
Family Medicine Experimentals (N = 19)	Elicitation	1.83	1.56	0.27	2.48*
	Mutuality	1.67	1.55	0.13	1.80 (p=.08)
	Moral Reasoning	1.90	1.71	0.19	1.54
	Planning	1.67	1.50	0.17	1.73 (p=.10)
	Execution	1.76	1.62	0.14	1.25
	Overall	3.38	3.01	0.37	1.27
Internal Medicine (N = 4)	Elicitation	2.16	1.74	0.42	1.58
	Mutuality	1.88	1.81	0.07	0.32
	Moral Reasoning	2.12	1.70	0.43	0.86
	Planning	1.83	1.62	0.21	1.07
	Execution	1.97	1.61	0.36	2.01
	Overall	3.95	3.30	0.65	0.80
Fourth Year Medical Students (N = 9)	Elicitation	2.08	1.52	0.56	4.17***
	Mutuality	1.93	1.57	0.35	2.86*
	Moral Reasoning	2.19	1.58	0.61	3.51**
	Planning	1.85	1.50	0.35	2.77*
	Execution	2.01	1.66	0.35	2.22 (p=.056)
	Overall	4.07	2.82	1.25	4.35***

*p < .05
**p < .01
***p < .005

TABLE 2

COMPARISON OF DIFFERENCE SCORES BETWEEN EXPERIMENTAL GROUPS AND FAMILY MEDICINE CONTROLS

	Family Medicine	Internal Medicine	Fourth Year Medical Students
Elicitation	0.218	0.362	0.510*
Mutuality	0.178	0.114	0.398*
Moral Reasoning	0.138	0.376	0.554*
Planning	0.150	0.188	0.328*
Execution	0.128	0.354	0.338
Overall	0.340	0.620	1.220*

*$p < .05$